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# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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July 1, 2013

TO: Internal File

THRU: James Owen, Lead *JO*

FROM: Amanda Daniels, Hydrologist *AD*

RE: 3R2S Panel Block B, Canyon Fuel Company, LLC, Sufco Mine, C/041/0002, Task #4367

### SUMMARY:

The Utah Division of Oil, Gas & Mining (Division) received an application of an amendment to the MRP of the Sufco Mine on June 5, 2013. The application seeks approval to add Block "B" of the 3R2S Panel for mining. They seek to modify the current monitoring and mitigation plan for undermining the South Fork of Quitchupah 2R2S Block "A" portion of the stream channel to include Block "B" of the 3R2S Panel.

This memo addresses the application's compliance with the hydrology (R645-301-700) section of the Utah Coal Mining Rules. Contents and information provided are sufficient to meet the requirements of this section of the Utah Coal Mining Rules.

The amendment is recommended for approval.

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**TECHNICAL ANALYSIS:**

**OPERATION PLAN**

**HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

**Analysis:**

The applicant has submitted an updated Monitoring and Mitigation Plan, identified as Appendix 3-14 of the MRP, as well as an updated PHC, specifically pages 7-51G through 7-51J. The Monitoring and Mitigation Plan was originally approved for the mining of the South Fork of Quitcupah 2R2S Block "A" and has been updated to include the 3R2S Block "B" panel.

Due to the planed longwalls that will cross under the South Fork of Quitcupah Creek pre- and post-mining surveys will be conducted along the length of the creek to be undermined. The applicant has committed to the following hydrology related studies that will take place above the 2R2S Panel Block "A" and the 3R2S "B" panel: stream channel profile surveys, establishing 4 stations to portray stream flow, conducting gain/loss surveys of the stream channel, regular water monitoring, as well as a definition of the stream channel, springs, and surrounding area geomorphology.

While mining under the channel, specific hydrology related monitoring will take place, including extensive monitoring of the stream for fracturing, dewatering, water quality issues and the movement of the stream channel. Surface flow will be monitored twice a month and will continue to be monitored quarterly for 2-years prior to mining through the area. Two stockponds identified as 94-115 and 94-116 will be monitored during mining. The mine has also committed to providing a report to the Division and the Fishlake Nation Forest once every two weeks via email, giving updates to the longwall location as well as any changes in the surface and steam channel. The monitoring plan is contingent on weather related access to the area.

Additionally the applicant has identified various methods to mitigate any subsidence crack and fractures identified within the stream channel wet bank.

**Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of the hydrology section of the Utah Coal Mining Rules.

**RECOMMENDATIONS:**

The amendment is recommended for approval.